PHYTOTOXICOLOGY PRE-OPERATIONAL ASSESSMENT SURVEY IN THE VICINITY OF THE CANADA BRICK PROPERTY (FORMERLY MILTON BRICK) MILTON-AUGUST 16, 1990

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Phytotoxicology Pre-Operational Assessment Survey in the Vicinity of the Canada Brick Property (Formerly Milton Brick), Milton - August 16, 1990

Canada Brick is the owner of the former Milton Brickwork property, which has been vacant since at least 1980. The old Milton Brickwork was demolished several years ago and Canada Brick is planning to construct a new brickwork on the industrial plant site. In light of this, a pre-operational vegetation (fluoride) assessment survey was conducted in August 1990 by Phytotoxicology staff. A similar survey was conducted in August 1981. Both surveys were requested by the MOE Central Region.

Surveys which were conducted in 1976 and 1977, when the former Milton brickwork was operational, revealed that the highest (moderately elevated) fluoride concentrations in vegetation occured to the east-northeast and east-southeast of the brickwork. The most extensive injury to sensitive vegetation (e.g. wild grape) also was observed to the east.

Maple foliage and/or forage samples were collected from the 5 site areas sampled to the southeast, northeast and north of the plant site in 1981 (see attached figure). At each maple site, foliage was collected from exposed middle branches facing the Canada Brick property. At each maple and forage site, duplicate samples were collected, using standard sampling procedures. Also, during the survey, the maple collection sites and other vegetation were visually inspected.

The foliar inspections in the survey area revealed no unusual injury on vegetation known to be sensitive to fluoride emissions (e.g. wild grape and Eastern White pine) other than injury which was typical of natural causes (e.g. insects, diseases, weather) and/or road salt applications.

As expected, the analytical results on the attached table show that concentrations of fluoride at all maple and forage sites were well within the normal background range.

Following the opening of Canada Brick's new brick production plant, a post-operational survey will be conducted by the Phytotoxicology Section.

Fluoride Concentrations Detected in Maple Foliage and Forage in the Vicinity of the Canada Brick Property, Milton - August 1981 and 1990.

Site	Maple Species	Approximate Distance & Direction from Former Brickwork*	Average Concentration** (ppm, dry wt.) 1981	1990
		CONCENTRATIONS IN MAPLE FOLIAGE		
1	Silver	580 m SSE	6	4
3	Silver	450 m ESE	7	3
4	Manitoba	450 m ENE	3	1
	Silver	425 m ENE	7	3
	Sugar	450 m ENE	NS	1
5	Silver	475 m N	3	2
		Rural ULN Guideline		15
		CONCENTRATIONS IN FORAGE		
Site	Site/Sample Description (1990)			
2	Grazed Pasture (mostly mature/ senescent grass)	525 m SE	6	2
4	Cut Hayfield (mostly green grass)	450 m ENE	3	1
5	Cut Hayfield (mostly green grass)	475 m N	3	<1
		Rural ULN Guideline		12

* Distance from the approximate centre of the old brickwork building (see figure)

** Average of duplicate sample results, except 1981 values which are based on a single sample. The 1990 averages have been rounded-off to the nearest whole number

NS - Not sampled

Map Showing Canada Brick Property, the Former Milton Brick Building and Vegetation Collection Sites - 1981 and 1990